THE NAVY & MARINE CORPS AVIATION SAFETY MAGAZINE

www.safetycenter.navy.mil • September - October 2010

Approach

FLYING IN COLD WEATHER CONDITIONS

The Navy & Marine Corps Aviation Safety Magazine
September-October 2010 Volume 55, No. 5
RADM Arthur Johnson Commander, Naval Safety Center
Col. Mark Erb, USMC Deputy Commander
John Mahoney Head, Communications and Marketing
Naval Safety Center (757) 444-3520 (DSN 564) Dial the following extensions any time during the greeting.
Publications Fax (757) 444-6791

Approach Staff

Jack Stewart Editor and Distribution
jack.stewart@navy.mil Ext. 7257
Allan Amen Art Director
allan.amen@navy.mil Ext. 7248
John Williams Graphics, Design & Layout
john.a.williams1@navy.mil Ext. 7254

Aviation Safety Programs Directorate

Capt. Mike Zamesnik Director
Michael.Zamesnik@navy.mil Ext. 7225
Kimball Thompson Deputy Director
edward.thompson@navy.mil Ext. 7226
Cdr. Monte Yarger Aircraft Operations Division
monte.yarger@navy.mil Ext. 7203
Maj. Anthony Frust Aircraft Maintenance and Material Division
anthony.frust@navy.mil Ext. 7223
Cdr. Allen McCoy Aircraft Mishap Investigation Division
allen.mccoy@navy.mil Ext. 7236
Capt. Nick Davenport Aeromedical Division
nicholas.davenport@navy.mil Ext. 7228
Cdr Duke Dietz Safety Culture and Risk Management Division
duke.dietz@navy.mil Ext. 7212

Analysts

Cdr. Monte Yarger NATOPS/WESS Program Manager
monte.yarger@navy.mil Ext. 7203
Leslee McPherson Asst Div Head, WESS, ATC, NEXTGEN, MISREC
leslee.mcpherson@navy.mil Ext. 7245
LCdr. Ian Mackinnon C-9/40, C-130, P-3, E-6B, P-8
ian.mackinnon@navy.mil Ext. 7272
LCdr. Jeff Padgett C-12/20/26/35/37, T-6, T-44
jeffrey.j.padgett@navy.mil Ext. 7142
Maj. Scott "Alis" Nicholsen, USMC AV-8B, F-35, NVD, JSSC
scott.nicholsen@navy.mil Ext. 7216
Lt. Brian "Band Camp" Abbott E-2, C-2, UAS, MFOQA
brian.j.abbott@navy.mil Ext. 7274
LCdr. Jason "Grease" Domzal EA-6B, T-2, T-34, T-39, T-45
jason.domzal@navy.mil Ext. 7224
Lt. Cody "Milkbone" Hitchcock FA-18A-G, EA-18G, ARSAG
cody.hitchcock@navy.mil Ext. 7208
Maj. Ryan "Timmeh" Harrington, USMC FA-18A-D, F-16, F-5, T-38
ryan.e.harrington@navy.mil Ext. 7217
LtCol. Kevin "Hopper" Conroy, USMC Marine Liaison, MV-22, CH-53D/E, NVD
kevin.conroy1@navy.mil Ext. 7209
Maj. Jason Levy, USMC CH-46E, H-1, H-57
jason.levy@navy.mil Ext. 7206
Lt. Otto "Hulka" Cochran H-60, MH-53E
Sidney.cochran@navy.mil Ext. 7207
Lt. Beth "Liz" Zdunich H-60
elizabeth.zdunich@navy.mil Ext. 7242
Lt. Rey Stanley Facilities Branch, Fuels, CFR/ARFF, BASH
reynaldo.stanley@navy.mil Ext. 7281
ABCM (AW/SW) Lance Hands ALRE/Air Terminal
lance.hands@navy.mil Ext. 7279
ACC Brian Soper ATC
brian.soper@navy.mil Ext. 7282
All Analysts All
safe-code11@navy.mil Ext. 7811

Mishaps cost time and resources. They take our Sailors, Marines and civilian employees away from their units and workplaces and put them in hospitals, wheelchairs and coffins. Mishaps ruin equipment and weapons. They diminish our readiness. This magazine's goal is to help make sure that personnel can devote their time and energy to the mission. We believe there is only one way to do any task, the way that follows the rules and takes precautions against hazards. Combat is hazardous, the time to learn to do a job right is before combat starts.

Approach (ISSN 1094-0405) is published bimonthly by Commander, Naval Safety Center, and is an authorized publication for members of the Department of Defense. Contents are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or the U.S. Navy. Photos and artwork are representative and do not necessarily show the people or equipment discussed. We reserve the right to edit all manuscripts. Reference to commercial products does not imply Navy endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author. *Approach* is available for sale by the Superintendent of Documents, P.O. Box 979050, St Louis, MO 63197-9000. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (866) 512-1800. Periodicals postage paid at Norfolk, Va., and additional mailing offices.

Postmaster: Send address changes to *Approach*, Code 71B, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399.

Send articles and letters to the address above, or via e-mail to the editor, jack.stewart@navy.mil.

CONTENTS

Features

Focus on Cold Weather

Whether flying in cold weather or just trying to survive the elements, it's time to prepare for all circumstances.

3. **Below Freezing in the Day—Colder at Night**
By Ltjg. Tim Labresh
A helo goes down in the mountains in an area covered with trees and snow. The crew wasn't as prepared as they should have been, as the temperature dropped throughout the night.

6. **A Special Airfield**
By LCdr. Patrick Smith
Flying in Alaska has many challenges, especially when you have snow and freezing temperatures.

8. **Dress to Egress**
Will You be Ready?
By Ltjg. Micah A. Kolcun
Not so fast. The planned mission was cancelled and the crew was diverted to a cold-weather-survival exercise.

15. **Good Roll to the End**
By LCdr. Chris Hayter
And the Hornet pilot said, "This is where the flight became memorable, and not in a good way."

18. **Touch and ... and ...**
By Lt. Jeremy Arnott
The Hawkeye power levers can be difficult to move, unless you know this bit of information.

20. **How I Almost Hovered a T-34**
By LCdr. Allen Cahanding
If the winds are strong enough, maybe hovering is an option.

26. **Are You Thinking What I'm Thinking?**
By Lt. Christopher Seguine
Let's give the new ASO a mishap to deal with during his first week on the job.

28. **After the Third Pass**
By Lt. Brandon Miller
High bird activity and gear problems challenge this Orion crew.

30. **Taipei Medevac**
By Lt. Josh Taylor
A team effort is needed to get a Sailor medical treatment ashore.

N T E N T S

Departments

2. **The Initial Approach Fix**
Are you ready to fly in cold weather conditions?

11. CRM: **Substitutes for Sound Judgment**
By LCdr. Jeremy Vaughan
Try telling the skipper that the maintainers need to replace an engine for no good reason.

14. **Bravo Zulu**

17. **Mishap-Free Milestones**

22. ORM Corner: **Go Around, Or Not!**
By LCdr. Matt Jones
A NALO mission to Haiti almost becomes a disaster in support of a disaster.

24. Best Practices: **Lean Forward and Choke Yourself**
By Ltjg. Craig T. McLemore
Realistic training makes for better training.

IBC **Brownshoes in Action Comix**

September-October Thanks

Thanks for helping with this issue …
LCdr. Scott Dantzscher, HSC-26
LCdr. Nick Vande Griend, VAQ-139
LCdr. Chris Pratt, VT-28
Lt. Jason Grose, VP-45
LCdr. Kenneth Ward, HSL-51
LCdr. Corey Moore, HSL-51
Lt. Kallie Rose, VAW-126
John Minners, CNATRA
Capt Kurt Thormahlen, USMC, HMH-363

Statement of Ownership, Management and Circulation

The United States Postal Service requires all publications publish a statement of ownership, management and circulation.

Date - 01 October 2010	Title of Publication - Approach
Publisher - U.S. Navy	USPS Publication No. - ISSN1094-0405
Editor - Jack Stewart	Frequency of Issue - Bimonthly
Owner - United States Navy	Total No. Copies Printed – 16,400
No. Copies Distributed – 15,858	No. Copies Not Distributed - 542

Total Copies Distributed and Not Distributed – 16,400
Issue Date for Circulation Data Above - July-August 2010
Location of Office of Publication
Commander
Naval Safety Center
375 A Street
Norfolk, Va. 23511-4399

Editor's Note: We are transitioning our web site as this issue is being published. The new URL is: http://www.public.navy.mil/navsafecen/. Please bookmark the new URL for future reference.

Front cover: A photo composite helo flight over a snowy mountainous terrain.

The Initial Approach Fix

Cold Weather

Are you ready to fly in cold weather conditions?

What if your plane goes down on a cold, snowy mountainside? Will you be prepared to survive if you punch out or crash in freezing temperatures? Could you survive until the rescuers arrive? What about two or more days? Did you preflight your survival gear? Does your radio work?

We could play the "what if" game for a variety of scenarios. Don't just stay ahead of the plane, stay ahead of all possible circumstances. This is where cold weather discussions come into play. We have several articles in this issue that point out what could happen. Put yourself in their situation and consider every flight as the one where it could happen to you. When the cold weather comes, will you be ready?

The new ORM Instruction is out

The new Operational Risk Management instruction is now available at the Department of the Navy Issuance website http://doni.daps.dla.mil.

The new instruction includes five enclosures which expand and define roles and responsibilities required by all naval personnel in ORM Fundamentals, ORM Time Critical Risk Management (TCRM), ORM Training Continuum, ORM program and evolution evaluations and an ORM glossary.

You can also access the instruction online at www.safetycenter.navy.mil/. Select the ORM link at the top of the page, then look under the ORM Tools and Resources heading and click on the USN Operational Risk Management Instruction (OPNAVINST 3500.39C).

In Memoriam
School of Aviation Safety, Departing

Doctor Milton H. Bank, II (1935 – 2010)

Naval Aviation suffered an enormous loss with the passing of Doctor Milton H. Bank, II. The renowned Naval Postgraduate School professor and Director of Academics at the Navy's School of Aviation Safety (SAS) died on May 25, 2010 with his family at his side.

He graduated from Pontiac High School in 1953 and entered the Naval Academy.

A Naval Aviator, he was a fighter pilot who completed a combat cruise to Vietnam. This included safely bringing back a Phantom that was so badly damaged from antiaircraft fire that it had to be craned off the ship in San Diego. Upon departing for his second combat cruise, LCdr. Bank was diagnosed as a diabetic. He was subsequently medically retired from the Navy and returned to civilian life.

He earned a PhD in Aero-Structures in 1971, and was hired by the Naval Postgraduate School, where he taught in the Aeronautics and Astronautics Department for the next five years. He then transferred to the School of Aviation Safety – a minor personnel move that would have significant and lasting consequences to the tremendous benefit of Naval Aviation.

Known simply and affectionately as Doc Bank, he was internationally recognized in the fields of aviation safety and aircraft accident reconstruction. His passion, though, was teaching and educating. Doc had a natural, exceptional ability to explain complex and difficult engineering concepts to students from all varieties of academic backgrounds. His method allowed even naval aviators who majored in the proverbial "underwater basket weaving" to comprehend and execute practical applications of aircraft structural analysis.

Doc Bank taught the structures portion of the Aviation Safety Officer and Aviation Safety Command courses for almost three decades. He received numerous awards for teaching excellence, and he taught 19,900 students over the years. He will be sorely missed by Naval Aviation.

Freezing in the [illegible] ider at Ni[illegible]

An MH-60s crew goes down in a wooded area in West Virginia on a training flight with 17 people onboard. Rescue is hours away. It's cold and getting colder.

BY LTJG. TIM LABRESH

The weather is something that aviators continually review. We use temperature, pressure altitude, and density altitude to calculate what power we expect to get from our engines and performance from our aircraft. That result matches up to what power is needed for the different phases of flight such as takeoff and landing. We use projected weather for the areas in which we intend to operate to make decisions on where we are going to fly, what we expect to encounter, and if we can get the operational or training mission completed.

As much as we consider the weather for the mission, we do not always prepare for the conditions we might encounter if we were forced to unexpectedly land, ditch or eject. In recent years, the military has been operating in primarily hot climates such as Iraq and Afghanistan. Most of the emphasis for the last decade, understandably, has been on training and equipping our forces for the hot weather they will encounter. Although not as often, we train in cold weather back in the states.

I rarely feel cold in the cockpit, regardless of the outside temperature; the environmental control system (ECS) works as advertised. Even in the Virginia winters, I am comfortable flying with only the required gear: flight suit, helmet, gloves, boots and survival vest. This is the basic gear we wear on every flight, regardless of the time of year. On flights like this, the only part of a pilot that typically gets cold is their feet, and those freeze regardless. We didn't wear cold-weather boots.

In a recent mishap involving a helicopter operating in mountainous terrain in the middle of winter, there was a lack of ade-

quate cold-weather gear. The crew went down in a very remote, wooded area in the mountains of West Virginia. The aircrew found themselves in snow-covered terrain, cold-weather survival came to the forefront—this was no longer a training scenario. Some crew members were stranded in this environment for more than 14 hours. Were they prepared?

The aircrew and passengers were from three different Navy, Marine and Army commands. Realizing the crew did not have adequate gear, they had to improvise or go without. Some had thermal underwear and others had wool socks, but nobody was fully prepared. The doors had stayed closed in flight, so they didn't feel the wind or the chill. On the ground, the temperatures were below freezing during the day and even colder at night.

MONTHS BEFORE THIS MISHAP, a training evolution known as Southbound Trooper was completed in Blackstone, VA., at the Fort Pickett National Guard Training Facility. Ten of our pilots and 10 aircrewmen supported this exercise. The temperatures were in the 50s and 40s during the day and dipped at night. We wore our flight suits and our light summer-weight jackets—the only jackets we were issued and are approved for aircraft use. Several crew members had lightweight fleece vests. This equipment was fine for the short time we spent coming and going from our operations building and inspecting the aircraft, but not adequate for extended periods in freezing temperatures. We were issued winter gloves but no pilot wore them, as they are too bulky to maneuver the controls and still do all the button-pushing required to operate our aircraft. We also had long underwear and winter socks, but it was more of a personal preference than required equipment. Most of the flying we did was within the confines of the base, and you didn't have to worry about being outside for a long period of time, so naturally we wore what was comfortable. Months later, the mishap crew flew farther west into the mountains, and did not adjust their cold-weather clothing and survival gear.

Obviously, that was the wrong approach. We were well prepared for the worst flying conditions, however, we weren't adequately prepared for what we would encounter if we were outside of the aircraft.

The value of land-survival training for the crew and most of the passengers prevented frostbite or cold-weather injuries. They made use of their personal and aircraft survival gear and items, such as the two wool blankets kept in the SAR curtain. Some of the passengers brought day packs which provided e-tools and MREs.

There were three different types among the crew, so selecting which radios would be most effective became a concern. Being in a canyon in a quiet area with no nearby cell phone towers didn't help the situation. Interference among the radios and with the downed aviator locator system (DALS) also was a problem. The Army radios seemed to have the best reception, and by turning the other radios off, as well as the emergency locator, we eventually contacted a civil aircraft, who relayed our situation.

Small amounts of engine oil and pyrotechnics helped make a controlled fire that kept the crew and passengers warm and occupied. The injured were kept inside the helicopter to keep them warm, and out of the wind and driving snow. Improvisation and survival training helped prevent hypothermia and other cold-related injuries.

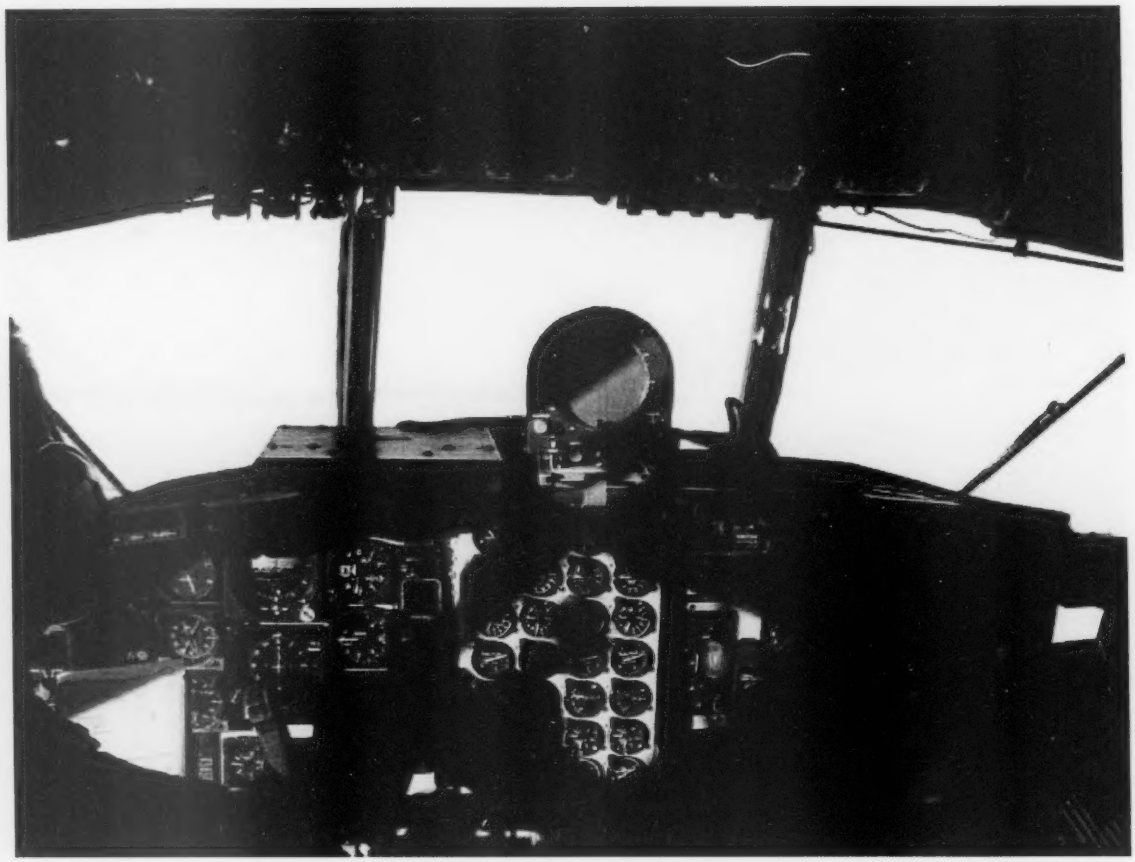
Pencil flares were instrumental in the rescue process. They could be seen through the driving snow. Several people climbed a tree and hung a reflective orange sheet. When the weather cleared the rescue crews spotted the crash site only because of the orange sheet.

We hadn't adequately managed all the potential risks, and were not prepared with the optimum survival gear. Fortunately, everyone made it home and without any major cold-weather injuries. As in all our flights, and certainly in any mishaps, we try to learn from the mistakes that cost us as well as the ones that didn't.

LTJG. LABRESH FLIES WITH HSC-26.

Cold-weather gear is costly, and here we see the necessity for the gear to be on the person, if not in the aircraft. Don't dress for the flight, dress for the crash.—Editor.

A Special Airfield



BY LCDR. PATRICK SMITH

Kodiak Island. The mere mention of this airstrip should send a tingle down a pilot's spine in the winter months. It's a hot spot for Navy SEAL winter training because of its accessibility and weather, so we go there a lot in the C-130. For anyone who hasn't had the pleasure of flying into frosty Kodiak, let me explain why it should be treated with respect.

There's a reason the VR community has designated Kodiak as a "special qualification airfield": It is next to a 2,000-foot peak. You can't wave off if you mess up the touchdown; it's too aggressive of a turn to downwind for most aircraft to negotiate. You can't fly straight ahead because you will hit the mountain. You have to be perfect. Before anyone signs for an aircraft headed to Kodiak, they must first watch a video that outlines all the airfield hazards.

The missed-approach point for the ILS is situated more than 3.5 miles from the runway threshold. It's that far because if you were to fly any closer, the terrain surrounding the airport is a threat to aircraft. You need the margin of safety for the climb without hitting anything.

Kodiak doesn't have deicing equipment. Instead, they use their two large, heated hangars to keep their planes free of snow and sleet accumulations until they're ready to taxi.

The Coast Guard pilots in Kodiak are an educated bunch, and very familiar with cold-weather operations. They readily share knowledge of their home port. The only problem is that they are only available for half your trip: The takeoff as you leave.

At VR-55, which is based in Point Mugu, Calif., we treat Kodiak with particular reverence. Here's a story where we felt we had done everything possible to not let Kodiak get the better of us, yet it almost did.

As we checked the weather for our eight-hour flight to Kodiak, we were very encouraged by what we saw. Upon arrival, we expected high ceilings, low winds, and a daytime landing. No problem. The en route flight was uneventful.

About an hour before landing, the controller reported that the forecast had changed. A 1,500-foot ceiling and 3.5 miles of visibility with blowing snow would now be our arrival weather. The conditions still were above minimums, but just barely. Compared to the fog at Point Mugu, this landing would be a piece of cake. We commenced the approach. At six miles the blowing snow started, and we were in a total whiteout for the entire approach. At four miles, we still didn't have the field. Exactly at 3.5 miles, we got the field and proceeded inbound for landing. We touched down no problem.

The next night we got about 10 inches of snow, which was not in the weather forecast. Because snow on the ground was a new event for our crew, we needed to solicit the help of our Coast Guard C-130 pilot friends. They advised us to get most of our checklists completed before we pushed out of the hangar, so we could start-up and taxi immediately after the towing evolution. We carefully reviewed our checklists and thoroughly briefed the towing and engine starts.

SNOW WAS HEAVILY FALLING as we briefed. Once the tug was disconnected, we started engines. The No. 3 engine was started in normal rpm and everything looked fine. The No. 4 engine was brought up next. As I programmed the GPS after an uneventful start, I heard on the ICS, "We're moving!"

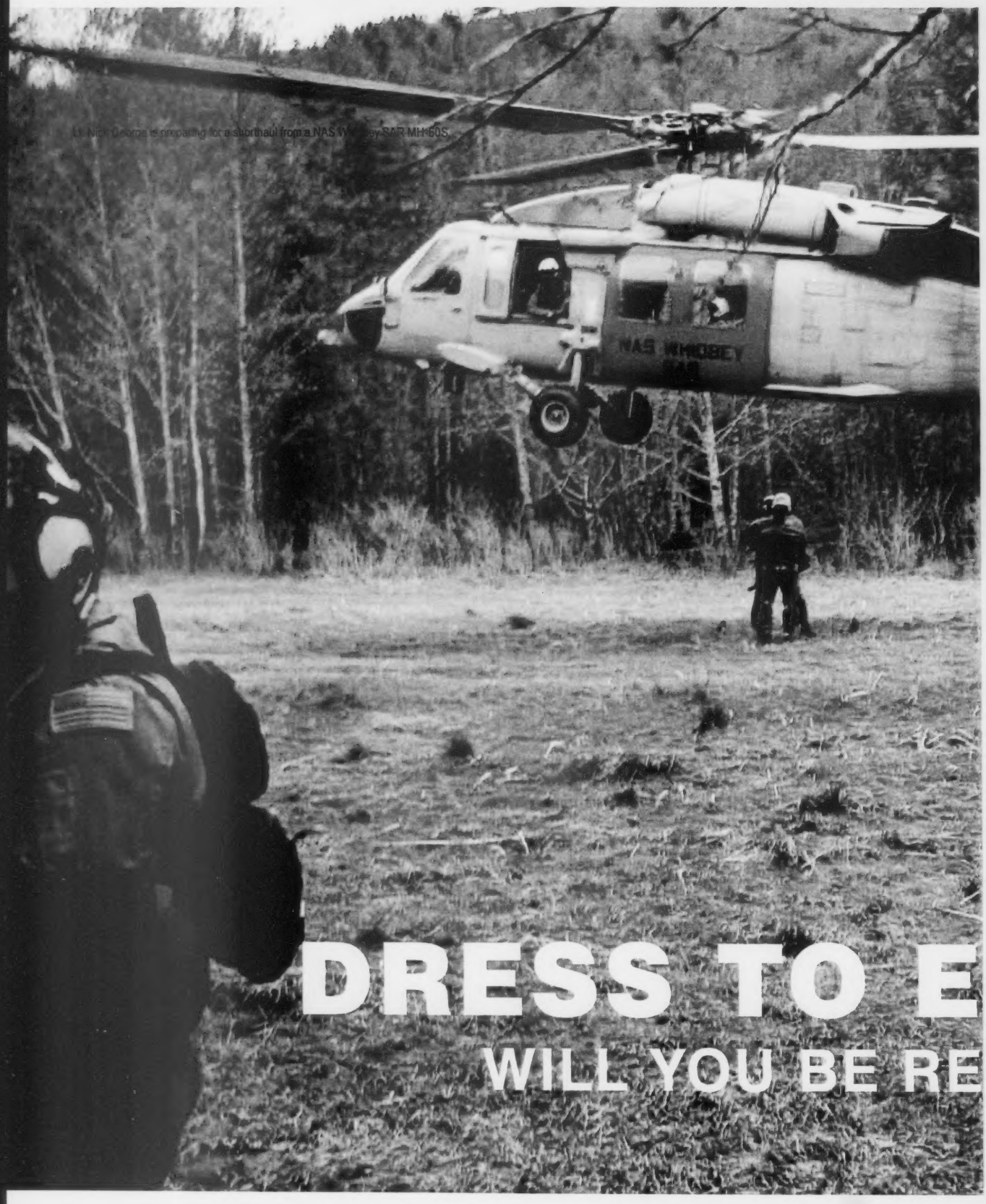
What? Huh? I looked up and saw my right wing move forward at an alarming rate, toward a pickup truck that was parked about 15 yards forward of the aircraft's nose. The loadmaster in front of the plane jumped out of the way, and a Coast Guard mechanic, who was driving the truck, hopped in and peeled out. It seemed like 20 sets of hands were crisscrossed on the condition levers as we lurched forward. Both operating engines were pulled into feather and the aircraft motion stopped.

What had happened? When we were towed out of the hangar the aircraft was situated on hard-packed snow. In these conditions the engines should be symmetrically started in low speed to avoid asymmetric thrust. We had read the chapter in NATOPS that mentioned this situation. However, we had neglected to brief it during our hurried start sequence after the tow out of the heated hangar. We were so worried about snow accumulation that we neglected to take into account the impact of the snow under the tires of a 155,000-pound aircraft. Had anything been any closer to the aircraft as it moved forward, our plane would have been damaged.

We escaped the trip feeling a bit silly, and very fortunate to not have broken anything important. We learned that when you hurry for perceived pressure, things get missed. The snow was not as big a danger as slipping the tires of a C-130 during engine starts.

I have been back a few times since, and I'm always on my guard. For anyone who flies into Kodiak, good weather or bad, be on the lookout for the little things that can ruin your day.

LCDR. SMITH FLIES WITH VR-55.



Lt. Nick George is preparing for a shorthaul from a NAS Whidbey SAR MH-60S.

DRESS TO E

WILL YOU BE RE

BY LTJG. MICAH A. KOLCUN

My day began with a 0500 wakeup, so I could get to the squadron and prepare for our brief. As the new guy in the squadron, I focused on preparing the kneeboard cards, putting up the briefing board, and printing the weather and NOTAMS. At 0800 the crew assembled for a standard brief. As we walked to the PR shop to dress for the flight, our PR stopped me and told me my survival vest was ready. Being the new guy, I had been borrowing vests. I was happy to finally have my own. I waited as our PRs did last-minute adjustments to it, and I walked to the jet without checking its contents. Not once during the brief or when putting on the gear did I think about what I'd do if I actually had to use it.

Just after starting our preflight, the safety officer came out and said we would be participating in a SAR exercise. The SAR coordinators directed us to a van to take us to the SAR bird. On the ride over, we were told the exercise would last for 24 hours on Mount Baker, a 10,700-foot mountain in the Cascades. I immediately began to dread the night. I realized I did not have a jacket or thermals, and I would be receiving a good lesson on dressing to egress. We arrived at the SAR hangar and received our brief during the helo ride to the mountain.

NOT LONG AFTER TAKEOFF, we found a spot to land in the foothills of the Cascades. The terrain varies from 10,000 foot, snow-covered peaks, to low-lying valleys with dense woods and rivers. Such terrain can leave a crew battling the elements on a snow-covered mountain or dealing with muddy terrain infested with bugs. The weather changes quickly and the freezing level can drop down to as low as 1,500 feet in the spring. Rain and wind are a constant reality in the Cascades. A flightsuit and a T-shirt provide little protection against these combined factors.

As we got out of the helo with our instructors, we found ourselves in a valley near a river. Two of our crew were short-hauled to another location, leaving me and another ECMO with an exercise coordinator. To our relief we were told the exercise would only last a few hours, and we would receive training on survival and CSEL radios. The survival training involved finding water and food, building or finding shelter, locating a scattered crew, and signaling for help. Using our combat-survivor-evader locators (CSELs), we rendezvoused with the rest of our crew and proceeded with training. The last training point of the day involved CRM—in a survival scenario, it increases morale and the chance for survival. Keeping to their word, the SAR bird returned and hoisted us up for our return to NAS Whidbey.

I learned to always be aware of what gear I have. Even though Whidbey Island was a nice 60 F, we saw plenty of snow on top of the Cascade Mountains, and the freezing level was near 5,000 feet. Being slightly uncomfortable in the jet because of overdressing never will compare to the possibility of freezing to death on top of a mountain.

Ltjg. Scott Dearden starts a fire, while Lt. Nick George and Lt. Nathan Clayville standby to help.

Lt. Nathan Clayville deploys smoke to signal rescuers.

I always will preflight my gear and use the extra five pounds of gear allowed. I should have taken a few extra minutes to make sure the new vest had everything in it, and all the equipment was working. As good as the CSEL radio is, it will not work without a battery. Also, having items to help you build a fire, a water filter or purification tablets, and a poncho would be a nice start to the extra five pounds of gear.

I now give a few moments to think about survival and mention it in the brief. This was an exercise, but it was also a good reminder not to get complacent with survival.

LTJG. KOLCUN FLIES WITH VAQ-139.

Decision Making
Assertiveness
Mission Analysis
Communication
Leadership
Adaptability/Flexibility
Situational Awareness

Substitutes for **Sound Judgment**

BY LCDR. JEREMY VAUGHAN

I was the squadron maintenance officer walking into the skipper's office with mixed feelings. On the one hand, I was happy with the actions of our crew that afternoon. On the other hand, I was disappointed that my superstar technicians would have to go into overdrive to replace an engine for no good reason. I had followed NATOPS to the letter and never put our crew in danger, but I just didn't feel like Chuck Yeager at the moment.

I had looked forward to this flight from the moment it was put on the schedule—it's not often you get to fly and train with a good friend without the paperwork most training flights require. I should have known better about the paperwork. When you put two lieutenant commanders in the cockpit, expect the aircrewman to be on a heightened alert for excess confidence, and for stories that outstrip recent experience. We did our best to relieve those concerns by completing what I'm sure the aircrewman felt was an overly thorough brief, for what was supposed to be a simple search-and-rescue (SAR) proficiency flight, on a beautiful mid-winter's day over historic Tokyo Bay.

CRM Contacts:

Naval Aviation Schools Command
Crew Resource Management
181 Chambers Ave., Suite C
Pensacola FL 32508-5221
(850) 452-2088/5567 (DSN 922)
Fax (850)452-2639
https://www.netc.navy.mil/nascweb/crm/crm.htm

LCdr. Jeff Alton, Naval Safety Center
(757) 444-3520, Ext.7231 (DSN 564)
jeffrey.alton@navy.mil

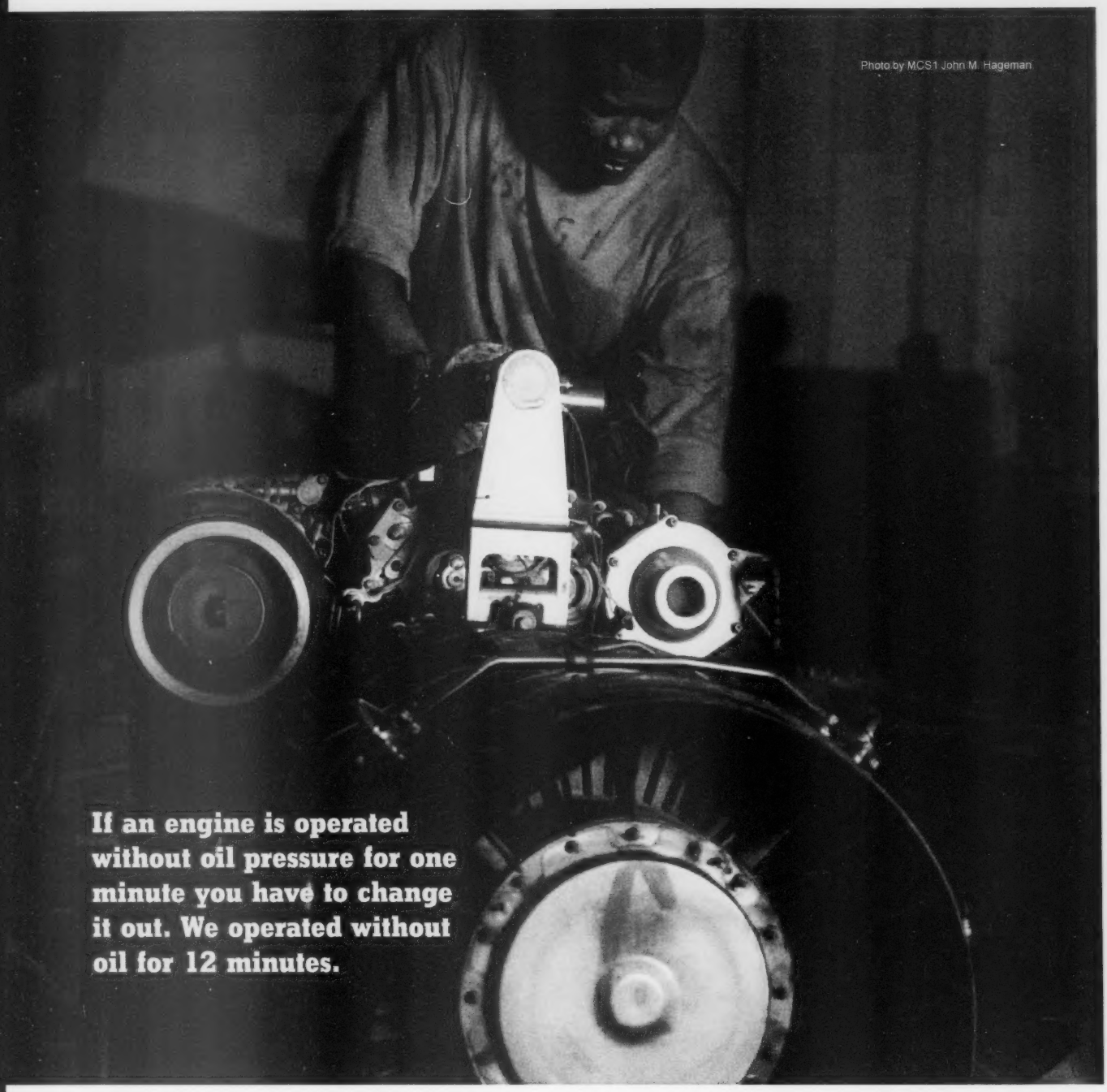


Photo by MCS1 John M. Hageman
If an engine is operated without oil pressure for one minute you have to change it out. We operated without oil for 12 minutes.

We waddled to the spinning aircraft in our dry-suits and flight gear. The aircraft seemed fine, and we took off on time. The bright, clear sun was getting lower on the western horizon, which made the shadows longer and the cool day colder. All our checklists went without a hitch. Our experience and confidence resulted in a quick and efficient transition from the ground to the air, where all of our work once more resulted in the exhilaration of flight.

We transited south over a Japanese suburbia that seemed as if a giant hand had piled millions of Legos on every available piece of land. A helicopter pilot is used to keeping one eye out for places to land, but Japan escalates that normally easy task into a brain teaser

straight from Sunday's New York Times. The landscape of houses piled on top of houses slipped quickly below us until we circled over the sparkling bay. We set up for the SAR patterns we had looked forward to practicing.

As my copilot in the left seat prepared the cockpit for hover work, I circled while looking for a clear area among the Japanese fishing boats. I cleared my right and looked left to start a slow turn in that direction. I saw a flicker on the instrument panel and glanced over to see normal instruments. I knew better than to look away for long, especially because the oil pressure indicated lower than during my last instrument check. I shared this info with the crew and rolled wings level to provide maximum attention to the potential problem.

As if on cue, an amber cube flashed, and our master-caution panel lit up. I called for the checklist, rolled the aircraft homeward, and put us into a single-engine flight regime. As we headed toward course rules, the engine's oil pressure slowly but steadily dropped.

Flashing amber-green. Steady amber. Flashing amber-red. Steady red. Zero.

The checklist called to check for secondary indications, and, if present, to complete checklists that prepared for single-engine flight. If secondaries not present, NATOPS says to monitor the engine's other instruments, shutting down the engine at any signs of engine failure. He didn't see any secondary indications, but we completed the single-engine procedures to cover all possibilities.

The 12 minutes of flight over Japanese Lego-land was packed with crew conversation and calls home to update our status. At least twice, my copilot talked about the prudence of shutting down the problem engine. We discussed that course of action, but experience ultimately talked me (and by extension, my crew), out of that famous "sound judgment." My copilot and I were former fleet-replacement-squadron (FRS) instructors, with close to 1,000 hours of combined simulator-instructor time. When the oil pressure drops to zero in a simulator-induced emergency, there's typically only a short amount of time before the student starts to experience secondary indications that push them to secure the malfunctioning engine.

I thought, "Why go outside NATOPS when there are no secondary indications, and by all rights, there should be secondary indications? Shouldn't the oil temperature rise? Shouldn't we have chip lights? Why is the engine still producing the same torque as it did earlier? Why shut down a potentially perfectly good engine because of a malfunctioning pressure indicator when flying over Lego-land? Why disregard NATOPS procedures to shut down the engine? If we balled it up, wouldn't there be questions as to why we decided to pull off an engine with zero secondary indications?"

As a result, we flew home with both engines online. All engine temperatures, gas-turbine speeds, and torques matched with the exception of one engine showing zero oil pressure for the entire flight home.

WE OPTED FOR A RUNNING LANDING, pulled the engine off-line once on the ground, and taxied back to our line. We also unknowingly trailed a thin but very hot stream of MIL-PRF-23699 engine oil all the way back to our spot. My technicians said that one of the carbon seals had blown, and they would have to work through the evening to change the engine. If an engine is operated without oil pressure for one minute you have to change it out; we operated without oil for 12 minutes.

I wasn't sure why I didn't feel like Chuck Yeager that afternoon as I walked into the skipper's office, but one question from him instantly cleared that up: "How can an engine show oil temperature or chips without oil to transmit the heat or move the metal?" Great question.

I had viewed NATOPS through a glass, darkly. Experience clouded judgment. Adherence to NATOPS procedure, conservative flying and decision-making kept us safe. But, common sense and sound judgment could have reduced the probability of catastrophic damage to one engine, the possibility of damage to our other engine, and could have saved our aviation enterprise another precious asset. As we say around here, "If there is any doubt, there is no doubt." Set yourself up for success. Fly the aircraft all the way to the ground and make NATOPS right.

NATOPS change in work, skipper.

LCDR.VAUGHAN FLIES WITH HSL-51.

BRAVO Zulu

HT-8

Ensign Stephen Defazio, a student naval aviator with HT-8 at NAS Whiting Field, Fla, was flying a TH-57C day, tactics-training flight. While returning to South Whiting Field, the helicopter main generator failed, illuminating the main generator-failure-caution light. Without being prompted, Ens. Defazio immediately began the emergency procedure using the NATOPS pocket checklist.

When the crew detected smoke in the cockpit, the instructor pilot maneuvered for a precautionary-emergency landing (PEL) on a nearby unprepared field. He contacted South Whiting tower to relay his intentions. Without hesitation, Ensign Defazio assisted with the procedural steps to prepare for landing, and called out obstacle-clearance distances throughout the approach into unfamiliar terrain. His confident performance during this emergency was on par with that of a fleet aviator.

HELTRARON EIGHT

HMH-363

RED LIONS

HMH-363

A CH-53D crew from HMH-363 was conducting a post-maintenance functional check flight (FCF) near Camp Bastion Airfield, Afghanistan. Five miles north of the field, while performing main-rotor-head smoothing, the No. 1 engine failed.

The functional check pilot under instruction, Capt. Peter Stachowicz, immediately diagnosed the abnormal engine indications. He executed the NATOPS procedures for a single-engine failure, while turning the aircraft toward the airfield. Capt. Brandon Busch, the functional check pilot, began troubleshooting the engine failure, and tried to restart the engine. After realizing the engine would not restart, Capt. Busch declared an emergency and computed minimum safe single-engine airspeed for the current aircraft weight and density altitude.

Capt. Stachowicz stayed above the minimum safe single-engine airspeed and made a single engine landing to the runway. Postflight inspection by maintenance determined the engine had seized because of an internal failure.

Cpl. Christopher Troussard, Capt. Brandon Busch, Capt. Peter A. Stachowicz, LCpl. Antonio Malave.

Good Roll to the End

BY LCDR. CHRIS HAYTER

What a great hop! As a former RAG instructor recovering from two years out of the cockpit, I was back in El Sweato again, this time as a Cat 3 replacement pilot (RP) in the FA-18C. I was leading my first hop since starting the syllabus: a good-deal day, circle-the-wagons bombing hop in Kitty Baggage, just northeast of NAF El Centro, Calif.

We had finished our bombing and were coming back into the carrier break for runway 08. Out of the break, I heard tower give my Dash 2 a call, "Dash-2, check your interval," indicating they thought he was tight. Next, I heard another FA-18 pilot check in for the carrier break behind us. After dirtying-up and running through my landing checklist (and, of course, flying the ball all the way to touchdown), I landed.

This is where the flight became memorable, and not in a good way. Let me pause here and point out that after accumulating just shy of 1,000 hours in the FA-18C in my JO fleet squadron, my next chunk of flying experience (and most recent, before I began my Cat 3 syllabus) was in the Rhino. As anybody who has flown both Hornets and Rhinos knows, the Rhino has significantly greater stopping ability on landing rollout. That being said, I still was becoming reacquainted with the stopping ability of the legacy Hornet's brakes. Now, back to El Centro.

I touched down and tower piped up, "Roman 61, good roll to the end."

I extended the speed brake right after touchdown and proceeded to coast down the 9,000-foot runway before getting on the binders. Decelerating through 100 knots, I applied aft stick and started applying moderate brake pressure. Everything seemed normal; the brakes effectively were decelerating the jet. I saw 100 knots groundspeed (KGS) passing the 5 board, 80 at the 4 board, and 55 at the 3 board (all below our SOP mandatory "go around" wickets of 100 KCAS at the 4 board, or 80 KCAS at the 3 board). By the time I got to the 2 board, however, my groundspeed still was 55 KGS, and my brakes refused to give me any more deceleration. By now I was standing on them. While staring at the 2 board, a sinking feeling crept in. I doubted my ability to go-around with the little runway remaining (I had done my quarterly roll-n-go training the previous week), so I committed to keeping the aircraft on deck. At El Centro the long-field gear is located about 1,500 feet from the end of runway 08. With my IP wingman landing behind me, and the "Dash 2, check your interval" call, up and over the long-field gear I went. I knew my bag of tricks was rapidly depleting.

I thought it would be better to high-speed taxi turn into the hold-short area to the south of the departure end of runway 08 than to take the jet into the unprepared surface off the end. That's where I tried to get the jet going, as I continued fighting my stopping problem. For my last trick, I released the brakes, selected emergency brakes, and got back on the brakes, but not gently enough. By selecting the emergency brakes, I no longer had the locked-wheel protection provided by the antiskid and the Hornet's normal brake system. Both mainmounts blew, and I skidded to a stop about 45 degrees off runway heading. I had tracked toward the holdshort line, but still was on the prepared surface.

My jet displayed HYD 2A and APU ACCUM cautions as my wingman said he saw a "pretty good amount" of hydraulic fluid leaking from my jet in the vicinity of the right brake assembly. The crash crews rolled, and I shut down on the runway to help mitigate the risk of fire. Leaking hydraulic fluid and hot brakes are not a good combination. As I sat there, I wondered how I got into that mess, and what I could have done better.

Postflight maintenance testing didn't find anything wrong with the jet's antiskid system. My misapplication of the emergency brakes locked the wheels and caused a skid which blew the tires. Part of a blown tire had severed a brake line, which caused the hydraulic leak and the associated cautions. Two new mainmounts and a repaired brake line later, the jet flew the next day.

After some pondering and good ready-room discussions, here are lessons learned and some recommendations.

"Good roll to the end."

This is a request from tower, not a mandatory call. When complying with this call, do not compromise safety by delaying (or reducing) initial application of brakes. After receiving clearance to land, the runway is yours to use for your deceleration as needed. Worst case, say, "Unable." All that would happen is the traffic behind you would be waved off. Tower just doesn't want you at 15 knots with 5,000 feet of runway remaining.

Speed brakes.

Though not a contributing factor to this incident, ready-room discussions reveal a split among pilots as to whether they routinely use the speed brake during landing roll out. NATOPS leaves it up to pilot discretion whether to use it. Even the ABORT EP allows, "Speed brake—as desired." NATOPS notes that speed-brake usage during a crosswind landing degrades directional control. Leaving the speed brake retracted during landing rollout should be the exception, such as when landing with a significant crosswind; the standard should be to use it. Absent a crosswind, there's no good reason to avoid using a drag-increasing surface while trying to slow down.

Normal braking technique.

There seems to be a widespread technique among Hornet pilots to test the brakes after touchdown to feel for resistance in the pedals, and then to get on the brakes only when decelerating through 100 knots. NATOPS does not recommend any such brake test after touchdown, nor does it direct one to delay application of brakes until 100 knots.

No later than (NLT) go-around point.

Our Joint Type Wing SOP defines mandatory go-around line speeds (100 KCAS at the 4 board, 80 KCAS at the 3 board), but nothing delineates a "go-around unfeasible" point. From our quarterly roll-n-go training, we know the Hornet attains flying speed in less than 2,000 feet of runway when power is reapplied at 100 knots. But, from much slower than this, 2,000 feet isn't enough runway to guarantee no tire tracks in the overrun. I suggest a 3,000-feet-runway remaining (configuration and environment dependent) is a good starting point for the discussion.

Who owns the long-field gear?

Just as when we brief sympathetic high-speed aborts during a section takeoff, the first aircraft to the long-field gear must pass it up during a landing emergency, unless cleared for the gear by the aircraft behind him. Throw in the "only good news on the radio" caveat and we're set, right? That sounds good for a section, but what a about when leading a division? Dash 3 and 4 probably are on the ball and at the 180 respectively, when Dash 2 is on the runway clearing lead for the long-field gear. Know from whom you expect to receive clearance for the gear—the flight member immediately behind you—and what the other flight members will have to do (go around).

Should lead call "aborting" or something else when past the NLT go-around point?

What is an aborted landing? A takeoff one discontinues is an "abort." A landing one discontinues is a "go around." What about when a landing is going poorly but the aircraft already is past the NLT go-around point? This situation is effectively the same as a high-speed aborted takeoff, when the jet is between taxi speed and flying speed with the intent to stay on deck. I recommend the intention to use the long-field gear should be expressed by saying, "aborting," which also alerts tower. Dash 2 should clear lead with the specific call "clear," versus the often briefed, but nebulous, "only good news on the radio." Finally, Dash 2 better be spring-loaded to quickly pipe up if lead calls, "aborting," as lead may be just seconds away from the long-field gear.

Muscle memory.

We live and die by our habit patterns. When a time comes to deviate from such a habit as it relates to basic aviation skills, like applying the brakes and clearing the runway, it's going to take conscious effort. My HUD tape betrayed my use of high-gain nosewheel steering (NWS) while I was trying to high-speed turn the jet into the hold-short area, as indicated by the NWS HI cue in the HUD. Ordinarily, we use NWS HI when making 90-degree turns such as when clearing the runway. Did my use of high-gain NWS at this moderate speed contribute to my skidding down the runway? Possibly. We must be deliberate with all control inputs, particularly in emergency situations. Poor habit patterns may come back to bite you.

Emergency brake technique.

The same pedal force applied during a landing rollout using normal brakes (with antiskid) will undoubtedly lock the wheels and blow the tires if used with the emergency brakes. Six to seven degrees of pedal deflection with E brakes likely will blow the tires. What does that feel like in my boots? I'm not sure, but when the overrun is approaching and normal brakes are failing, the tendency is to apply more pedal force than normal, rather than the "gradual application" called for in NATOPS. Using E brakes without blowing the tires will require a release and gradual, gentle reapplication, and deliberate override of muscle memory.

Since my incident, I've read numerous hazreps documenting various Hornet and Rhino braking incidents, many of which resulted in blown tires from improper emergency-brake application. When's the last time you did a go-around just because something didn't look right? It is better to have gone around when it wasn't necessary than to have kept the aircraft on deck and wish you had gone around. If you are past your NLT go-around point and still trying to stop, the long-field gear (if available) is a much better option than the emergency brakes. Just make sure you communicate your intentions early enough to get clearance from your wingman.

LCDR. HAYTER FLIES WITH VFA-87.

Mishap-Free Milestones

VFA-83	68,255 hours	16 years
HSC-2	40,000 hours	9 years

TOUCH AND ... AND ...

BY LT. JEREMY ARNOTT

"Keep the power up, we're already late," said my instructor from the copilot seat next to me.

I kept the power levers firewalled to get to the ship as quickly as possible. We already had been delayed by over an hour for last-minute repairs on our plane. We wanted to get to USS *Boat* and start logging traps as soon as possible, so I could finish CQ and graduate from the E-2C Hawkeye FRS.

Of course, once we got in comms range with the other Hawkeyes, we found that the Hornets were taking longer than normal, and all the Hawkeyes were holding overhead the ship. We slowed down a little, no longer in a big rush, and joined the other Hawkeyes in the overhead.

About 30 minutes after we arrived, the boss came up on the radio and said, "Charlie the Hawkeyes."

I looked below me and saw the first Hawkeye turn on his fuel dump, and push over the nose to head toward the ship. The other two ahead of us followed suit.

We were next. I looked down and saw about 10,500 pounds of fuel in the tanks, and we needed to get down to 4,800 to be below max-trap weight. "Dumps coming on," I called out to the NFO in the back, so he could

I looked forward and saw the ocean in front of me and thought,
"Oh my God, I'm going into the water."

back us up and help me remember to secure them before landing.

"Roger dumps," he said, and I looked down on the caution panel to make sure the fuel-dump light was on, but I saw nothing. The light didn't come on.

I tried cycling the switch with no luck. I looked at our fuel indicator to see if maybe just the light wasn't working, but the fuel level wasn't dropping. The fuel dump wasn't working for some reason. We looked through the pocket checklist (PCL), and asked our rep in the tower for assistance or any other solutions. After some discussion, the only thing we could come up with was to cycle the switch and the circuit breakers. We had already tried that, so with no other alternative, we threw down the landing gear for extra drag. We then flew overhead the ship at max power to burn off the fuel.

Finally, after what felt like an eternity, we got down to 5,500 pounds on gas and called the Boss, "Tower, 652 is ready to come aboard."

He replied with a "Charlie" call, and we came down for my first pass. At the initial, I mentally prepared to CQ, work hard in the approach turn, keep the meatball a qual ball high, watch for the burble, and fly the ball all the way to touchdown. I had done well in FCLPs, and felt ready to show the audience on the LSO platform what I could do.

I extended upwind to give myself plenty of time to get squared away by the 180. I got on-speed, trimmed it up by the 180, and flew a nice approach turn by the numbers. Rolling out on the ball, I kept the ball on the happy side all the way down. Crossing the ramp I felt the aircraft touch down and braced for the trap. After a half-second's pause I remembered my hook was up and I was doing a touch-and-go.

I applied back-pressure to the yoke to keep the nose-wheel from touching down, and went to add power with my right hand. The power levers wouldn't move. I tried to push them forward again and they wouldn't budge. After one more attempt, pushing as hard as I could, I looked forward and saw the ocean in front of me and thought, "Oh my God, I'm going into the water."

About this time I remembered some of the simulator instructors talking about why they had added the power-lever lock: To keep the pilot from accidentally pulling the power levers up from flight idle and into the ground range. If the levers popped up even the slightest bit then there was no way to move the power levers past flight idle.

I simultaneously said, "Power-lever lock," to my instructor, and lifted my hand up off the power levers. I raised my arm and slammed down on the power levers as hard as I could, as if my life depended on it.

This time I felt no resistance when I pushed the power levers forward, and jammed them all the way up to the stops. I held them there even after we had reached our 600-foot pattern altitude. Still feeling the bass drum thudding against my chest from the near-death experience, I finally brought back the power levers to keep from exceeding the 150 knots we used for the crosswind turn.

There was no time to say anything about what just had happened, because we needed to drop the hook and get the landing checks done for the next pass, my first trap. I continued CQing over the next couple days with no more incidents. I ended up qualifying priority-A so that I could go out and join the Bluetails of VAW-121, who already were on deployment.

When my instructor and I had the chance to talk about what had happened, we each had our own version. My instructor thought that my sleeve had been caught on something, while I still swear to this day the power levers were physically jammed (probably from popping up out of the flight range). The truth is, though that it didn't matter, we applied the fixes for both: my instructor sweeping back my sleeve and me slamming down on the power levers. One of the two actions fixed the problem.

What's the moral of this story? Listen to all the old war stories that people tell. If I hadn't remembered the reasoning behind adding the power-lever lock, then it might not have occurred to me to try pushing down on the power levers. Also, if there's a time-critical problem and two things might be causing it, just apply the solutions for both. My instructor and I didn't debate why the power levers wouldn't move, we just each applied our solution and between the two of us managed to fly away saving an $80 million plane, two pilots, and an NFO.

LT. ARNOTT FLIES WITH VAW-121.

How I Almost Hovered a T-34

BY LCDR. ALLEN CAHANDING

With two and a half years complete of my three-year tour, I felt experienced in the T-34C. I had just given up the ops job a week earlier and proud again to be the pit pilot. A helo pilot by trade, I took pride in circumnavigating low clouds and getting the X. I liked leading from the front and being the pilot who provided PIREPs to others, so they could launch and get their X. After all, my motto and closing remark on all of my squadron emails was, "Own the X."

If you attended primary at NAS Corpus Christi (KNGP), you are familiar with cold fronts during winter. In late October, a huge, fast-moving front blasted through South Texas; it was expected to bring massive winds and thundershowers. The storm still was far northwest of my local training area, so I had time to decide to fly or not.

I was the instructor pilot (IP) on a VFR hop for my on-wing's initial flight in his second stage of contacts. After an extra long brief, we checked the weather. The radar screen clearly showed the frontal line about 100 miles northwest of Navy Corpus and moving toward us. On radar, the front looked severe, but ahead of the front, the ADDS radar screen showed only pockets of red cells in the local Corpus Christi (CRP) area.

I felt we could get flight time for my student. He had been getting cancelled a lot and was falling behind his class. We took off and got above some puffy cumulus clouds, but I could see many darker cells in the distance already dropping rain. I took a look back at KNGP and it was clear, but the nearest cell was about 25 miles away. We claimed working area 6, which was the closest working area to Point Shamrock, the VFR arrival point to KNGP. I easily could see the weather situation at KNGP from area 6. I also got a PIREP from a fellow IP, who felt that KNGP would not see rain for at least another 15 minutes. I was confident I could RTB before any significant weather rolled in; how wrong I was.

After about 10 minutes in the working area, Corpus approach made a call on guard to report severe thunderstorms 15 miles north of KNGP and moving southward fast. I could see dark clouds moving in from the bay, but they weren't the most menacing clouds I had ever seen. Casually, we called Corpus approach and requested a VFR straight-in from area 6, instead of going to Point Shamrock. We were approved and started a fast cruise descent for runway 31. Passing through 2,000 feet and about eight miles out, I got my first gut feeling something wasn't quite right.

Although I could see the darker rainy clouds just north of the airfield, the sun still was out on the southern side, and it was peaceful, too peaceful. That weird feeling I had was the sound of silence. I was the only aircraft talking on the approach and tower frequencies after being switched. That's when I knew I shouldn't have been flying.

On short final, we were head to head with a raincloud. I could see the rain working its way down the runway. I told my student to focus on the landing, anticipate going into some rain, and to be careful with beta and hydroplaning. My student was strong, and I commented on his good nose-up-landing attitude. Then we went under the waterfall. The student selected beta and did a good job handling the low visibility. We slowed the aircraft to taxi speed and made a right on runway 04, the off duty. After coming to

a stop, we made our ground call. Ground instructed us to taxi to our line via taxiways Yankee/Bravo, but added, "Taxi at your own risk, because you're not visible to the tower in the rain … winds gusting to 43 knots."

We had stiff winds from our left rear quarter, and my student was concerned the airplane was leaning too far to the right. It also was difficult to see taxiway Yankee, so I told tower we would taxi to the end of runway 04 and make a right on Charlie taxiway, which was adjacent to our flight line. By now the wind and rain were so heavy we had difficulty seeing. We taxied at a snail's pace to the center of the runway, knowing we were the only ones moving around on the airfield. I didn't think the wind and rain could get any worse, but it did. Imagine yourself driving your car in the worse rain with no windshield wipers. We didn't know the wind got worse until tower reported, "Wind gusts now 55."

As we approached taxiway Charlie, my student started his right turn and then over rotated past centerline. Before I could say anything, he stopped the airplane and said, "Sir, I can't control the plane."

I TOOK THE CONTROLS and tried to trick it back to the left, to no avail. I also noticed the airplane was lurched forward because of the huge, right quartering tailwind, and it took all the brakes to prevent us from sliding. I knew we couldn't stay in this position long, so I continued a turn to the right, and faced the airplane directly into the headwind. The airplane switched from a nose-low attitude to a nose-high attitude. However, I didn't need much brake pressure to hold position because the big fan was doing some of the work for me. The next call from tower was surreal: "Wind gusts are now 73 knots."

With the nose propped high into the wind, I knew there was a real possibility I was about to log some inadvertent flight time. I added about 100 foot-pounds of torque to counteract the wind and made the nose squat on the front oleo. If I added too much torque I would be the first pilot to hover in a T-34. Tower made a good effort to provide reassurance, and sent out a duty driver to check on us. Tower kept giving us wind readings, and I told them I would try to taxi again after the wind dropped below 40 knots.

In the meantime, I coordinated with my squadron to give me the pole-position spot and have a lineman standing by. After the longest 20 minutes of our lives, the winds started to die down. I passed the controls back to my student and told him to taxi. The airplane behaved normally, and we made it back to the line.

I learned a lot that day about South Texas weather and my capabilities. There was a reason not many others chose to fly with an approaching storm. My big box of pilot invincibility shrank to a believable level. Regardless of your experience, platform, rank, or hours, always respect the weather and Mother Nature. That one training sortie was not worth losing our lives in an orange and white aircraft. Thank goodness we didn't hit that rain cloud in the landing transition, or it would have been a different story. Get a good weather brief, listen to those PIREPs, and never take any unnecessary chances. That's really what ORM is anyways: common sense. You're never safe until you're chocked and chained, at-sea or while shore based.

LCDR. CAHANDING FLIES WITH VT-28.

Go Around, Or Not!

LCDR. MATT JONES

In my 13 years of naval aviation, I have been fortunate. With the vast majority of my flight time being at the yokes of two venerable Lockheed aircraft, the P-3C and the C-130T, I have had my fair share of malfunctions and emergencies, but nothing to make you think, "Wow, that was close!"

Everyone is familiar with Haiti and the great suffering that its people have endured since an earthquake ravaged the island in January. The weeks and months following that disaster resulted in one of the largest outpourings of humanitarian aid in recent times. U.S. Southern Command quickly established Joint Task Force-Haiti, and its "Operation Unified Response" swiftly employed 12,000 military personnel, 15 ships and more than 40 aircraft. Impressive numbers, for sure, and that doesn't count the non-governmental organizations (NGOs), and other international relief agencies. The pilots for those organizations may not have a lot of flying experience.

Early on in the relief efforts, the Fleet Logistics Support Wing supported flights in and out of Guantanamo Bay, Cuba. We simply could not get into Port-Au-Prince because of the high volume of air traffic and its small ramp spaces. On this day, it was only our squadron's third flight into the international airport at Port-Au-Prince (MTPP). We had all the pubs and gouge that anyone could ask for: FLIPs, Jepps, airline trip reports from our reservists, and three-engine climb data. You name it, it was on board.

The flight down was uneventful. We flew jet airways all the way through Miami's airspace. We were then

handed over to a Port-Au-Prince controller for sequencing to the airport, roughly 80 nautical miles to the south. Communications were OK, but we had to pay a little more attention to make sure the right information was received on both ends. We were given the expected "GANIV 1A" arrival, which brings you in on the 24 DME arc for 60 radials, before turning final to intercept the ILS/DME runway 10 approach. My copilot flew a nice approach, and landed in hot and hazy conditions.

The sole runway at MTPP is just shy of 10,000 feet, with the main ramp midway down and only accessible through one taxiway. For the Herc, this requires rolling out past the taxiway and using one of the cutouts to make a U-turn and back-taxi toward the ramp, which we did.

Please send your questions, comments or recommendations to: Cdr. Duke Dietz, Code 16
Naval Safety Center
375 A St., Norfolk, VA 23411-4399
(757) 444-3520, ext. 7212 (DSN-564)
E-mail: duke.dietz@navy.mil

From the cutout, it's a couple thousand feet to the one taxiway leading to the commercial ramp—enough distance that you might want to advance the throttles slightly to cover the gap a little more quickly. No sooner had the pilot-at- controls moved the throttles that a few white lights from a plane on short final emerged out of the haze. The lights got lower and lower, starting to round out. In disbelief, I reached down to my left to make sure our taxi and landing lights still were on.

I blurted out something to the effect of, "Uh, tower … convoy is still on the active."

To tower's credit, he transmitted, "[*civilian aircraft*], make left 360 and rejoin final."

I'd like to spin a harrowing yarn on this one, maybe embellish it a bit as pilots and fishermen tend to do. But, the civilian aircraft touched down and stopped short of us, in front of the taxiway we were heading toward. From its maneuvering on final and landing, it was apparent the aircraft was a light twin, and our lives really weren't hanging in the balance given the distances involved. That's how I initially rationalized it, anyway.

WHEN YOU THINK ABOUT THESE SITUATIONS, the little hairs on your body stand up. What if it wasn't a small aircraft? What if it had made an unplanned touch-and-go, easily closing the distance between us? Or worse yet, what if we had been departing to the west, into him, to gain a more favorable climb-out over the water instead of the mountains? It really would not have taken much to turn this apparently benign runway incident into a catastrophy.

What happens from here? Reprimand the civilian pilot? Here's how that went down, no kidding.

Tower: "[*Callsign*], I would appreciate you obtain landing clearance next time before you land at this airport."

Civilian pilot: "Oh, OK. I am sorry about that."

In all likelihood, this is something that will occur again. ICAO nations and our FAA have made strides to reduce runway incursions, but many factors out there lend themselves to more occurrences. Consider the following factors for Port-Au-Prince International on this day:

- Unfamiliar airfield
- Foreign controller and pilots
- Variety of dissimilar aircraft
- Non-radar environment
- Poor visibility.

We witnessed many potential holes in the Swiss cheese that could have rendered a routine NALO mission to Haiti an absolute disaster.

LCDR. JONES IS A MOBILIZED RESERVIST FLYING WITH VR-62.

Lean Forward and Choke Yourself

BY LTJG. CRAIG T. MCLEMORE

A fellow E-2 squadron released a hazard report (hazrep) regarding a fire during start-up, which detailed the Odyssean travails of the crew during egress. While discussing this hazrep at squadron NATOPS training, members of our ready-room tendered many diverse ideas about how to most safely egress the aircraft on deck.

These ideas ranged from the standard ("out the main hatch if the fire is on the right side, out the overhead hatches if on the left") to the strange ("climbing out the ditching hatch and sliding down the side of the plane") to the downright unsafe ("running through the fire to avoid jumping off the plane"). We then discussed at length and in great detail many additional points that might affect the crew's real-time operational risk management, on the ground and in the air. While opinions varied widely, one thing was obvious: We needed to delve deeper into the practical side of all forms of emergency egress.

Conducting ditch and bailout training in a static plane is a normal practice in the E-2 community, usually coinciding with someone's annual standardization check. It's also normal for the person being recertified to completely derig their seat and egress wearing the entire parachute seat assembly. One thing that was not normal, based on my experiences in the fleet replacement squadron (FRS) and in the fleet, was a deliberate effort by the safety department to simulate real-world scenarios during egress training. The normal mode of training is tailored toward reciting memory items and warnings, and then going through the motions of getting out of the airplane in a nondynamic, canned environment.

As my squadron discovered in mid-February 2010, crew resource management (CRM) becomes a huge safety issue when five people, carrying 75 pounds of gear apiece, frantically try to egress through the same hatch. After splitting the ready room into mission crews of five (two pilots, three NFOs), each crew then stepped through a series of training evolutions run by

our NATOPS officers over the internal communication system (ICS) in a powered-up aircraft. Unlike normal ditch-and-bails that emphasize getting back in the books, we instead focused on how to survive an E-2 plummeting out of the sky. Our safety team tried to design a training scenario to make us rethink our preconceptions about emergency egress. They did a heck of a job.

The first problem set before us was a fire on the ground during engine start, which should have been easy, or so we thought. My crew's pilot in command gave the standard brief that we'd heard a thousand times: "Starting the right engine, out the main hatch; starting the left engine, out the overhead hatches."

The mission commander rogered up, and the pilot began to say the start-up sequence for the right engine. By direction of NFO NATOPS, I (the forward-most back-end crew member) "saw" flames erupting from a piece of equipment across from the main hatch. Fifteen seconds into the problem, and we already needed a new game plan.

I thought, "In order to get out of the burning plane, we have to run through the fire? No thanks! I'd rather just go out the ditching hatch. But, that's 10 feet off the ground, so how do you safely do it?"

Our brains worked hard to find a solution. After spending five to 10 minutes meandering through the nuances of a ground egress, we moved into the more dynamic regimes of airborne ditching and bailing out.

The ditching training was uneventful as far as I could tell. We walked through the procedure — memory and non-memory items alike — step by step to build good muscle memory. In a normal practice ditch, we usually call it good at, "I'll use this handle as my reference point during egress."

This time each person actually grasped a reference point, released from their seat one-handed, and pulled hand-over-hand to the ditching hatch, which provided much more realistic training. During bailout, though, things got interesting. At the beginning of the new scenario, all the back-end crew members were in the normal mission seating arrangement: Facing sideways, upper koch fittings released, gloves off, visors up, keyboard assemblies out, pens and grease pencils in hand, ICS connected, and oxygen masks stowed.

Upon hearing "Prepare to bailout" over ICS, we scrambled to don oxygen and gloves, face forward, and lock into our seats as quickly as possible. After receiving the signal to bail out, I hurriedly disconnected my oxygen hose and ICS leads and started my egress (quickly enough for the observer to feel he needed to get out of my way). What I did not account for in my rush was tangling my helmet's ICS cord around the plane's oxygen hose.

I must have looked a bit like Wile E. Coyote, as my legs continued running, but my head stopped going forward, causing me to land supine on the deck. After flailing around like a belly-up turtle for 10 seconds, I righted myself and exited the aircraft. In real life, I might have cost the lives of the crew members sitting behind me, because I was in too much of a hurry to properly get out of my seat. This situation calls to mind the adage, "Slow is smooth, smooth is fast."

It relieved my bruised ego a little to learn I wasn't the only person to make that same mistake during the training. But, I still felt alarmed that so many people had blocked the only route from the combat information center to the main hatch by making such a dumb mistake.

While opinions varied widely, one thing was obvious: We needed to delve deeper into the practical side of all forms of emergency egress.

THIS FOCUSED, HANDS-ON TRAINING was highly beneficial to the squadron. Rather than just learning our emergency procedures by rote memorization, we intimately got acquainted with the aircraft systems designed to save us. Rather than focusing on whether the memory item says "a" or "the," we walked through each scenario one step at a time, emphasizing a Murphy's Law mindset: assume that anything that might kill you will happen and be ready to react accordingly. Rather than assuming that training each individual would suffice, we tested the abilities and shortcomings of the crew, and began to develop the ORM and CRM skills necessary to deal with any emergency situations. Because of the squadron's aggressive and forward-leaning approach to safety, I believe that each member of our ready room (and more importantly, every crew) will be better prepared if and when disaster strikes.

LTJG. MCLEMORE FLIES WITH VAW-126.

Are You Thinking What I'm Thinking?

BY LT. CHRISTOPHER SEGUINE

The week my squadron stood-up an aviation mishap board (AMB), I was in the middle of a job-turnover to be the aviation safety officer (ASO). I was glad that the School of Aviation Safety had done a great job of impressing the point that once you become an ASO, you have to be ready for anything.

VT-10 is a primary and intermediate naval-flight-officer training squadron, flying the T-6A Texan II and the T-1A Jayhawk. With a packed flight schedule most every day, and with the dynamics of the training command, we tackle safety issues on a daily basis. I had anticipated having plenty on my plate in my new role in the squadron. But, my true indoctrination as an ASO came when the outgoing ASO called my house at 2000 on a Monday and said we were standing-up an AMB in the morning. We had a possible mishap that did not involve the loss of aircrew or aircraft, but would require an investigation. I could hear the elevated tone in his voice, which confirmed he was not messing with me during our turnover week. I knew I was in for a busy week when his last words were, "There's some stuff goin' on, man!"

We met bright and early Tuesday morning in the XO's office. One of our aircraft had landed at Tallahassee Regional (TLH) with a damaged main-landing gear. The aircrew drove home that night and were back in the Pensacola area. They spent most of their day at medical, having the full post-mishap physical.

As the AMB senior member, the XO gave each member their orders for the day. The safety officer and the outgoing ASO remained in Pensacola to conduct interviews and prepare the mishap-data report (MDR) should the incident break the threshold of a mishap ($50,000). The XO and I flew a T-6A to TLH to conduct the on-site investigation. We dug into the mishap kit, grabbed what we needed, and discussed our intentions to inspect with an open mind. We knew it was important to avoid making quick assumptions. After a planning session and a NATOPS brief, I was going flying. Who said an AMB was all work?

A 45-minute flight later, the XO and I shut down in the spot next to our damaged aircraft. Like all other CNATRA units, TraWing 6 uses contract maintenance. A team of their experts and a CNATRA maintenance representative had driven to Tallahassee and were waiting for us on the ramp when we taxied in. The aircraft had been quarantined until we arrived. After shutting down, we opened the canopy to a greeting from a maintainer who quickly broke the ice: "XO, I know exactly what happened."

My first thought was, "Great, I thought we weren't going to make any assumptions."

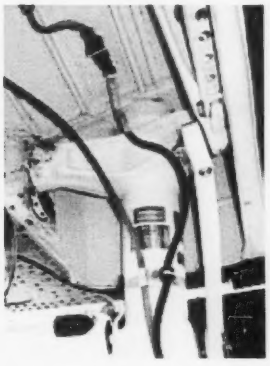
Our maintenance team seemed to have it all figured out, so we took a look at the obvious damage and listened. The explanation of how the landing-gear strut had detached from the aft trunnion fitting made sense. We had a few questions, and after those were answered the XO looked at me and said, "Mitch, are you thinking what I'm thinking?"

I think we had both gotten a sinking feeling in our gut when we realized the nature of the gear damage. In light of what little they knew from the night before, our maintainers had issued a one-time integrity check of all main-landing gear before T-6A flight ops commenced that morning. After seeing the damage up close, we believe we found what had caused our sinking feeling: The issue affecting this gear could not have been detected by an integrity check. A component improperly had been installed and was behind a panel in the wing, aft of the landing gear. Within seconds, the XO whipped out the Blackberry and was calling the commodore. As business jets taxied by, and with wind blowing strong in the background, my XO recommended to "down" all T-6As until the proper inspections could be completed. The commodore concurred and the word was passed.

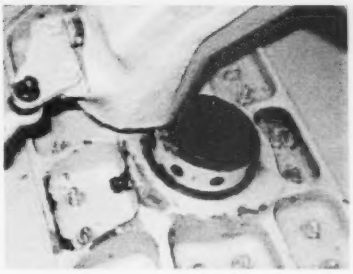
With the immediate safety concern for the Texan fleet addressed, it was time for me to fully inspect the incident aircraft. The XO went inside to diplomatically explain the situation to the FBO personnel; our aircraft was in prime real estate on a busy ramp and obviously couldn't be moved any time soon. I took dozens of photos and inspected every inch of the aircraft. I picked the brains of

the airframers who had driven out, and I pored over their manual. After a few hours it appeared we had gathered the information we needed to determine what had happened. Before we jumped back into our T-6A, we had our maintenance team complete the full inspection of its pivot pins and write the requisite MAFs. We grabbed a little barbeque, briefed the short flight home, and then headed back to the Cradle of Naval Aviation.

The board reconvened when we arrived to put all the information on the table before we broke for the night. The safety officer and outgoing ASO had drafted the mishap-data report (MDR), but were confident the damage (maintenance hours included) would cost in the range of $25,000. The XO and I felt strongly the cause of the damage stemmed from an improper landing-gear-strut-replacement procedure. The mishap board officially stood down the next morning because we did not meet the cost criteria for a Class C mishap. My predecessor and I immediately got to work drafting the hazrep.



The aircrew had gotten unsafe-gear indications after raising the landing-gear handle following a touch-and-go. The instructor and SNFO ran the landing-gear-malfunction checklist, received three-down-and-locked, and made a visual straight-in to an uneventful full stop. During postflight, the IP noticed the left main-strut



trunnion was not attached to the aircraft. The strut had been replaced about a month earlier, and the aircraft had then logged more than 100 landings. During the installation of the new strut, the pivot-pin retaining bolt had been positioned so it ran through the strut, but not the pivot pin. The pivot pin was free to work its way aft until the trunnion finally separated from the fitting.

The T-6A is a relatively new aircraft to CNATRA, so maintenance had done very few of these strut replacements. The design of the strut/pivot-pin assembly makes it easy to improperly install the retaining bolt because there are no key indicators that anything is out of place. The damage and repairs ended up costing $26,000. Our maintainers worked well as a team, identified the problem, and developed a plan to prevent a recurrence.

This event was a sobering introduction to my ASO role, especially in light of how bad it could have been. The other landing-gear-attachment point, the forward-strut trunnion, bore the entire load of the left main and bent, but did not fracture. Only a few weeks earlier we had conducted a mishap drill with the watchstanders to exercise the premishap plan. The XO had commented that we needed to do a realistic drill for the AMB as well. I went ahead and scratched that item off my to-do list.

LT. SEGUINE FLIES WITH VT-10.

AFTER THE THIRD PASS

BY LT. BRANDON MILLER

We had another typical morning at El Salvador International Airport: turkey vultures flying high, sparrows and swallows flying low, 90-degree heat with 100-percent humidity, and winds lightly blowing right down the pipe. The morning wave of commercial air traffic had passed, and our venerable P-3 Orion was cleared to do pattern work for the next two hours. Our goal was 14 landings between three pilots; after the third pass things got interesting.

After two touch-and-go landings, I had passed the controls to my copilot. Upon reaching the 180, we dropped the gear and got an unsafe nose-gear indication. The light in the gear handle glowed bright red, and the nose-gear indication displayed a glaring barber pole. My copilot notified tower and the rest of the crew about our landing-gear issue. We entered a 1,500-foot delta pattern to execute NATOPS procedures.

For CRM reasons, I had everyone come to the cockpit. We ran through the landing-gear procedures. My flight engineer read through the unsafe landing-gear-down-indication procedure in NATOPS. To our benefit, landing-gear malfunctions are not time critical. This fact, coupled with our six-hour fuel load, gave us plenty of time to make sound decisions. After consulting NATOPS, my two copilots, my flight engineer and I determined the nose gear was released from its uplock. We continued with the procedures.

Our observer for the flight was an electronic warfare operator; meaning, we had a qualified crewmember capable of operating the Star Safire imaging camera. The camera is located just forward of the nosewheel well, conveniently positioned to visually inspect the gear without a chase plane or tower flyby. After lowering the turret and inspecting the assembly, we saw no physical obstructions or damage to the landing gear. Each landing-gear assembly has a downlock switch that sends an electrical signal to the landing-gear position indicator telling us the gear is down and locked.

Using the imaging camera, we observed the nose-gear downlock switch had what appeared to be a feather or a piece of cloth blowing in the wind. We discussed the possibility of this material interfering with normal downlock-switch operation, and its potential as the source of our problem. The landing-gear safety pins have the typical "REMOVE BEFORE FLIGHT" red streamers attached. Thinking that perhaps part of a streamer had stuck in the gear when the flight engineer removed it on preflight, I had the observer bring the pins from the aft of the aircraft. After careful examination, we determined the pins were intact, and the streamer had not been stuck in the gear as we had previously thought.

The first NATOPS warning tells us that if damage is suspected, cycling the gear may cause further damage. With frequent bird activity in and around El Salvador International, we contemplated the possibility of damage from an unrecognized bird strike. With this in mind, we decided not to cycle the gear to get a down-and-locked indication.

At this point in the procedure, we believed it was

the switch and not the indicator. The glowing light in both landing-gear handles tells the flight station the gear does not agree with the handle position. If it was just an indicator problem, then we would not have received the

red landing-gear light. An additional confirmation was the sounding of the horn for the landing-gear warning system, indicating all the gear were not down and locked. After referencing the diagram in NATOPS, we were confident it was a switch and not the indicator.

WE LEFT THE DELTA PATTERN and headed south over the Pacific Ocean to execute the next step: acceleration to 300 knots to use air loads to lock the gear down. Reaching 260 knots, the nosegear continued to indicate unsafe, while the port main-landing-gear position indicator oscillated between locked and unlocked. Not wanting to further complicate the situation with additional unsafe indications, we immmediately slowed to 160 knots. After just having two gear indicators showing unsafe, we asked ourselves, "What next?" Fortunately, the port indicator returned to a down-and-locked indication for the remainder of the flight.

The next step in NATOPS suggests flying multiple pushups and pullovers to achieve a down-and-locked indication. Upon returning to the delta pattern, I briefed the copilot for back up on my G-meter indications and limits, being sure to not overstress the aging airframe. Similar to our lack of success with the speeding up to 300 knots, this also did not fix the problem.

Following this, I flew a 500-foot low approach while squadron personnel visually inspected the landing gear from maintenance control. The maintainers called, "All your gear looks down to us." We also thought our gear was down, but this news gave us the warm fuzzy that nothing visually was wrong with the gear.

By the two-hour mark, weather conditions around the field began to deteriorate with lowered ceilings, poor visibility, and areas of light to moderate precipitation within five to 10 miles of the airfield. These conditions in El Salvador are commonplace; it was only a matter of time before the downpours began. Realizing the importance of landing on a dry runway while in VFR conditions, I had the copilot call tower and tell them we intented to land. We also coordinated with maintenance control to meet us at the taxiway and install gear pins for the nosegear and port main-landing gear.

In the back of our minds, we still considered the rare possibility of a nosegear collapse on touchdown. With that in mind, we referenced the unlocked-gear-indication landing procedures in preparation for landing. The observer stowed all loose equipment and took his seat in the aft of the aircraft with the off-duty pilot. We wanted them away from the prop arc in case the gear collapsed and the props hit the ground. Because the landing-gear-warning system tone would go off for the entire approach, the flight engineer pulled the landing-gear-warning circuit breaker to facilitate CRM during the approach and landing.

I set up on a five-mile final and made a normal touchdown. Almost immediately after touchdown, my copilot called the nosegear down and locked. This call reinforced my belief that all landing gear had been down and locked the entire time we executed NATOPS procedures. We maintained power against brakes with the flaps held at the land position as an extra precaution, while we waited for the maintainers to pin the gear. Extra weight on the nosegear helped keep it locked.

Once maintenance arrived, we shut down engines Nos. 1 and 2, and had the nosegear and port main-landing gear pinned just in case there was unobserved damage. We then restarted engine No. 2, shut down No. 4, and taxied back to the line on Nos. 2 and 3.

The main factor that complicated our postflight discussion was the high bird activity and our inability to rule out a bird strike. Often, crews are unaware of a bird strike until postflight walkaround. Our pilots factor bird activity into their risk matrix for each flight. If the activity is too high, we notify tower that we'll wait for the conditions to subside. Once we taxied back into parking, maintenance did a conditional bird-strike inspection and found no evidence of a strike. Also, what appeared to be a feather or piece of fabric in the switch was nowhere to be found. Maintenance later placed the aircraft on jacks to swing the gear and experienced the same nosegear indications we did. The next day I learned a readjustment of the downlock switch remedied the problem. As for the port mainmount, we figured unusually high air loads were unseating the switch, and there have been no further issues.

LT. MILLER FLIES WITH VP-45.

TAIPEI MEDEVAC

BY LT. JOSH TAYLOR

Following routine dental work ashore, a Sailor's root canal became severely infected, and the infection spread through her cheek and into her eye. The ship's independent-duty corpsman (IDC) couldn't control the spread of infection with the limited antibiotics on board. Despite the several-thousand-mile separation between the ship, USS *Lassen* (DDG-82), and the carrier-strike-group's surgeon on the CVN, the surgeon immediately recognized the symptoms of a life-threatening infection. The surgeon urged the patient be taken by medevac to a hospital in 12 hours, or face the possibility of the rapidly-spreading infection moving into her lungs.

On a July evening, at about 2200, USS *Lassen* was operating in the Taiwan Strait. Lt. Phil Hardway, AWR2 Don Salamon, and I were the alert crew for the mission. In the middle of our NATOPS brief, our Det. OinC and the ship's operations officer interrupted to tell us of our shipmate's situation and mission change. Initially, we believed the ship would break off from the current mission and transit toward the nearest military hospital, which was in Okinawa, Japan. However, despite the life-threatening infection, the current mission did not lend itself to allow the ship to transit several hundred miles to the east. The only other option was to fly into Taiwan and deliver the Sailor to a local hospital, something that no other U.S. Navy helicopter had ever done. The ship soon was coordinating with the Red Cross and Taipei University Hospital in downtown Taipei, near Taipei City Airport. We broke out the publications for Taiwan and started planning for the medevac to Taipei.

A review of the Foreign Clearance Guide, PFPS, several TPCs, a FLIP, and four hours later, we were prepared. The Det. OinC was working with the American Institute of Taiwan (we don't have an official embassy)

and the naval attaché in Taipei, along with the watch officer from Carrier Strike Group 5 (CSG-5) to get the short-notice diplomatic clearance. The IDC was coordinating with the university staff to prepare the patient for transport and discuss the medical situation. Approval was granted by CSG-5 around 0300, and the diplomatic clearance was granted around 0500. The only hurdle remaining was a low-pressure weather system centered 100 miles north of Taiwan.

We called the command duty officer at the Navy Weather Center in Hawaii to coordinate a Dash 1. A preliminary report had weather at Taipei City Airport/Sung Shan Air Force Base with a ceiling at 1,700 feet, and three miles visibility. The northern tip of Taiwan is mountainous, and the water canal we would use to navigate into the airfield ran between two ridges. The highest point within a mile east of the canal was 2,700 feet and to the west was 2,200 feet. Anyone would understand our navigational concerns with the given weather.

While waiting for a 0550 sunrise, we completed the remaining administrative and preflight duties. We strapped in at 0500 to complete the alert-launch checklist and made sure the aircraft was ready to go. The HAC and I remained strapped-in, while the aircrewman went into the hangar to give the passenger brief to the patient and her escort. Our takeoff checks were completed by 0600. We struggled with intermittent rain showers about every five minutes that reduced our visibility to less than one mile. We launched at the next good-vis window with the understanding that if our radar couldn't penetrate the isolated rain cells, and allow us to see all the way to the mountainous terrain of northern Taiwan, we would RTB.

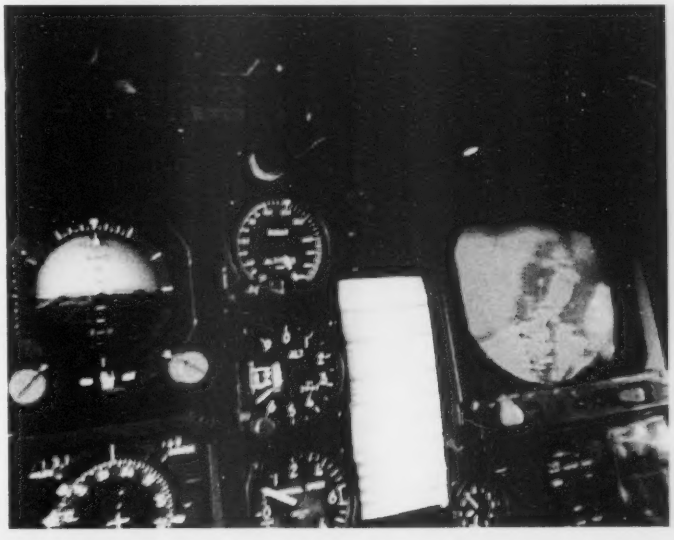
At 0630 the call went, "Paddles, Warlord 705, request amber for breakdown, green deck for launch."

The time had come to go. We got off the deck, made our "Ops normal" call, and immediately found ourselves flying through rain showers that reduced visibility to zero at some moments. Radar couldn't penetrate the rain cells beyond five miles, and we were unsure if VMC could be regained before making it to land. We discussed our situation as a crew and decided to RTB as briefed.

Once on deck, we shutdown, hopped out and went to check in with the weather center CDO in Hawaii. The ship's position continued to be influenced by the low-pressure condition north of Taiwan, but the heavy rain cells started to spread apart, creating holes. After hanging up the phone, we went to the bridge and checked the radar console for the SPS-73. We noticed the raster was not turned up, so the bridge team couldn't see the good weather pocket to the southeast. A recommendation was made to the OOD to head 210 degrees for five miles; the weather at that location would allow us a clear pocket to take off and climb.

We headed back to the flight deck to spin up and be ready for takeoff weather. Twenty minutes later we had the visibility and launched. The after-takeoff checklist was complete, and the weather was holding up. We continued toward Taipei, dodging a few rain showers along the way, but got to our planned entry point into Taiwan's airspace.

We got off the deck, made our "Ops normal" call, and immediately found ourselves flying through rain showers that reduced visibility to zero at some moments.



Photos by Lt. Josh Taylor

Thirty miles from land, we were contacted by their ADIZ controller. Everything was going like clockwork: Good communications with Taiwan, better weather, our systems were working 4.0, and the Sailor was in a more stable condition. Radar was picking out a distinct coastline at 12 miles, along with the river mouth that would lead us into the airport. Our only concern was the weather we'd encounter on the return flight to the ship.

By the time we arrived at the beach line, Taipei Approach was giving us radar vectors to the approach end of the active runway. Visibility was greater than five miles and the ceiling was around 6,000 feet; the weather was better than forecasted. We called runway-in-sight about three miles out, and we started our descent from 3,000 feet. The view of Taipei was hazy. One mile out, we were handed off to Sung Shan tower, and commenced a low approach, landed, and spotted our follow-me Jeep.

We arrived in front of the terminal with several Taiwanese Air Force personnel taking video and photographs. Our aircrewman assisted the patient and her escort to the waiting ambulance. The crew took a breath and acknowledged the excitement associated with completing a successful medevac into Taiwan. Moments later, the aircrewman motioned for HAC to get out of the aircraft. At the same time, tower came

over the radio and brought to our attention that the return flight plan needed to be signed. The HAC hopped out and returned 10 minutes later with our crewman, both smiling.

They strapped in and began to explain that we were the first United States military helicopter to land at the airfield. It was a cool feeling to be making history. We completed the takeoff checks and began our departure procedures. After receiving our clearance, we taxied in front of the civilian side of the airfield and all the way to the approach end of the runway in use. The controllers did not understand the request for a "present position takeoff."

We were finally at our takeoff point nearly 10 minutes later. We called, "Gauges good, on the go."

Leaving the country without passengers onboard allowed us to be relax a bit. We enjoyed the sights of the city on the way back to the coast. After going feet wet, the rest of our flight was uneventful. The weather was marginal VFR within 20 miles of the ship. We picked up the TACAN and shot the approach. The call, "In the trap, trapped," concluded our successful medevac mission to Taiwan. Without the help of the Air Boss, LCdr. Bill Reilein, Det. Ops, Lt. Eileen Crawford, and the CIC team on the ship, it would not have been so smooth.

LT. TAYLOR FLIES WITH HSL-51.

Excellent use of the principles of ORM, and although not articulated, the 5-step ORM process was in work as they planned this event. Once airborne, they made use of the ABCD tool as well. I don't think it's any coincidence you can see every tenet of our risk management process in this story. Good lesson-learned study showing a positive result.—LCdr. Vincent Garcia, ORM Division Head, Naval Safety Center.

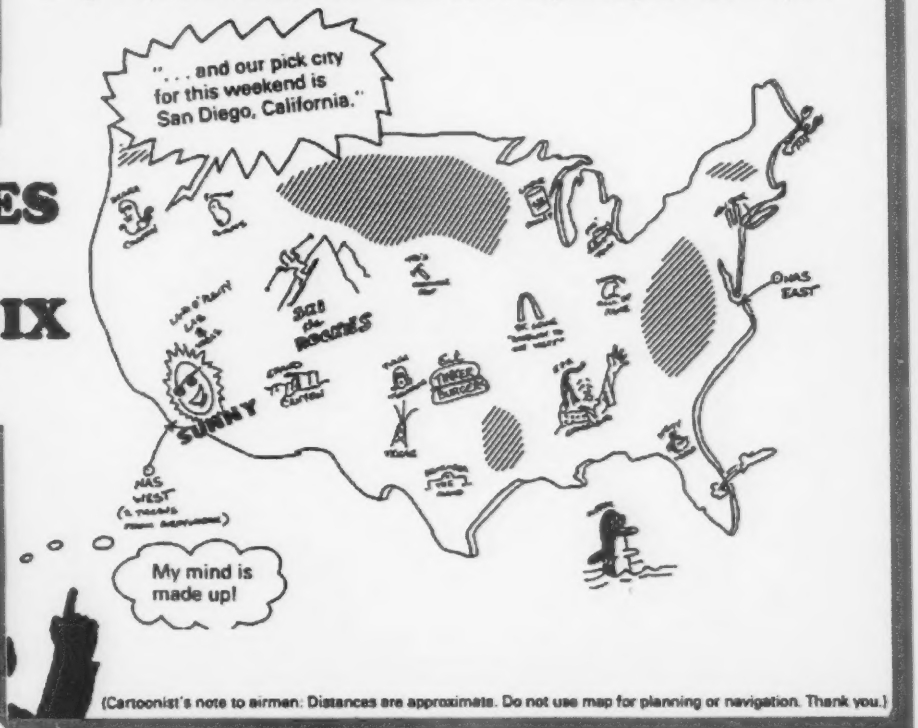
Mooch with help from Hey Joe presents:

BROWNSHOES IN ACTION COMIX

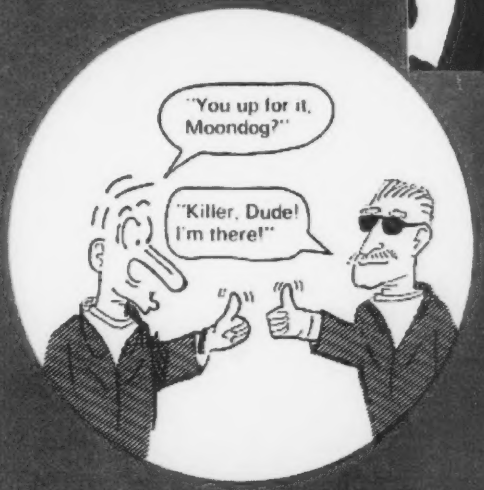
"The kind real aviators like"

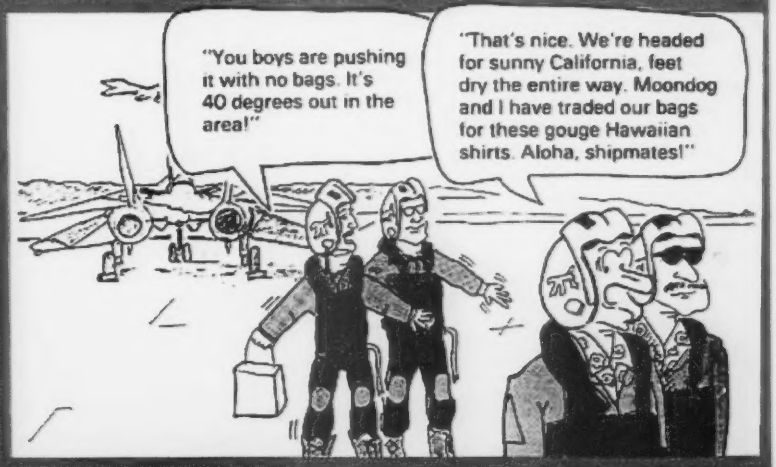
Contributed by Lt. Ward Carroll

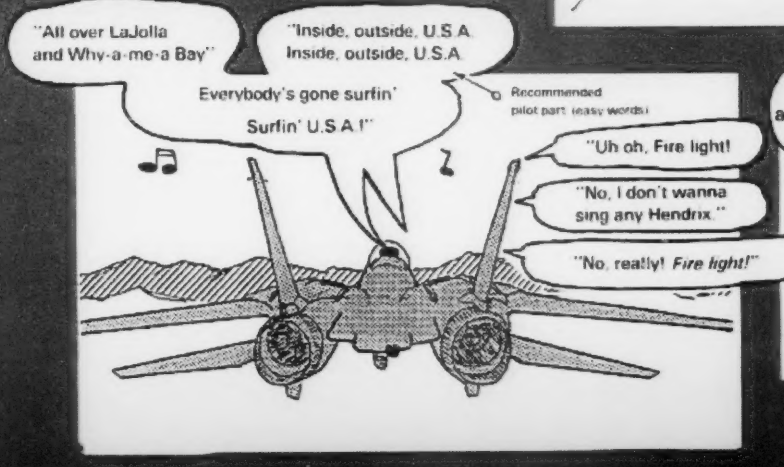
Dangerboy brainstorms on a destination for his upcoming cross-country . . .

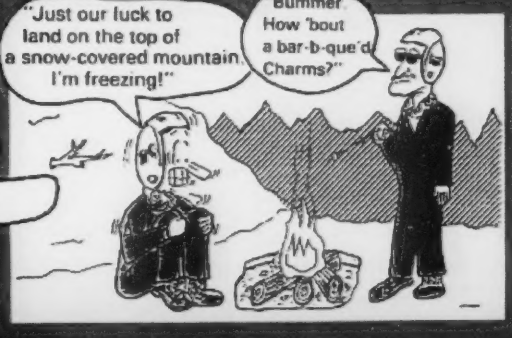

". . . and our pick city for this weekend is San Diego, California."
SUNNY
My mind is made up!
(Cartoonist's note to airmen: Distances are approximate. Do not use map for planning or navigation. Thank you.)

Finding a RIO is no problem as VF-3.14's FNG is from the area.




"You boys are pushing it with no bags. It's 40 degrees out in the area!"
"That's nice. We're headed for sunny California, feet dry the entire way. Moondog and I have traded our bags for these gouge Hawaiian shirts. Aloha, shipmates!"


"All over LaJolla and Why-a-me-a Bay"
"Inside, outside, U.S.A. Inside, outside, U.S.A.
Everybody's gone surfin'
Surfin' U.S.A.!"
Recommended pilot part (easy words)
"Uh oh, Fire light!"
"No, I don't wanna sing any Hendrix."
"No, really! *Fire light!*"



COLD WEATHER SURVIVAL

BE PREPARED

ORM

NAVAL SAFETY CENTER
EST 1951